



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

May 30, 2001

Peter W. van Wilgen
SNET Mobility, LLC
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: **EM-CING-057-010516** - SNET Mobility, LLC notice of intent to modify an existing telecommunications facility located at 363 Riversville Road, Greenwich, Connecticut. (Docket No. 50)

Dear Mr. van Wilgen:


At a public meeting held on May 25, 2001, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility with the expansion of a concrete pad for a potential tenant, Metricom, Inc. within the proposed compound, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies, but denied a new tower addition to support the VoiceStream platform, as this would constitute an expansion of the tower height.

The proposed modifications are to be implemented as specified here and in your notice dated May 16, 2001. The expansion of the concrete pad is in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as a change to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,


Mortimer A. Gelston
Chairman

MAG/RKE/laf

c: Honorable Lolly H. Prince, First Selectman, Town of Greenwich
Diane Fox, Town Planner, Town of Greenwich
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae
David I. Bass, Esq., Rubenstein & Green, LLC
Sandy M. Carter, Verizon Wireless
Ronald C. Clark, Nextel Communications, Inc.
Christopher B. Fisher, Esq., Cuddy & Feder & Worby LLP
Julie M. Donaldson, Esq., Hurwitz & Sagarin LLC



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

10 Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

May 17, 2001

Honorable Lolly H. Prince
First Selectman
Town of Greenwich
Town Hall
101 Field Point Road
P. O. Box 2540
Greenwich, CT 06836-2540

RE: **EM-CING-057-010516** - SNET Mobility, LLC notice of intent to modify an existing telecommunications facility located at 363 Riversville Road, Greenwich, Connecticut. (Docket No. 50)

Dear Ms. Prince:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for Friday, May 25, 2001, at 10:00 a.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

A handwritten signature in black ink, appearing to read "Joel Rinebold", written over a circular stamp.

Joel M. Rinebold
Executive Director

JMR/RKE/grg

Enclosure: Notice of Intent

c: Diane Fox, Town Planner, Town of Greenwich



FACSIMILE TRANSMITTAL SHEET

TO: JOEL RINEBOLD FROM: STEVE LEVINE
COMPANY: _____ DATE: 5-17-01
FAX NUMBER: _____ TOTAL NO. OF PAGES INCLUDING COVER: 2
PHONE NUMBER: _____ SENDER'S REFERENCE NUMBER: _____
RE: _____ YOUR REFERENCE NUMBER: _____

URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY PLEASE RECYCLE

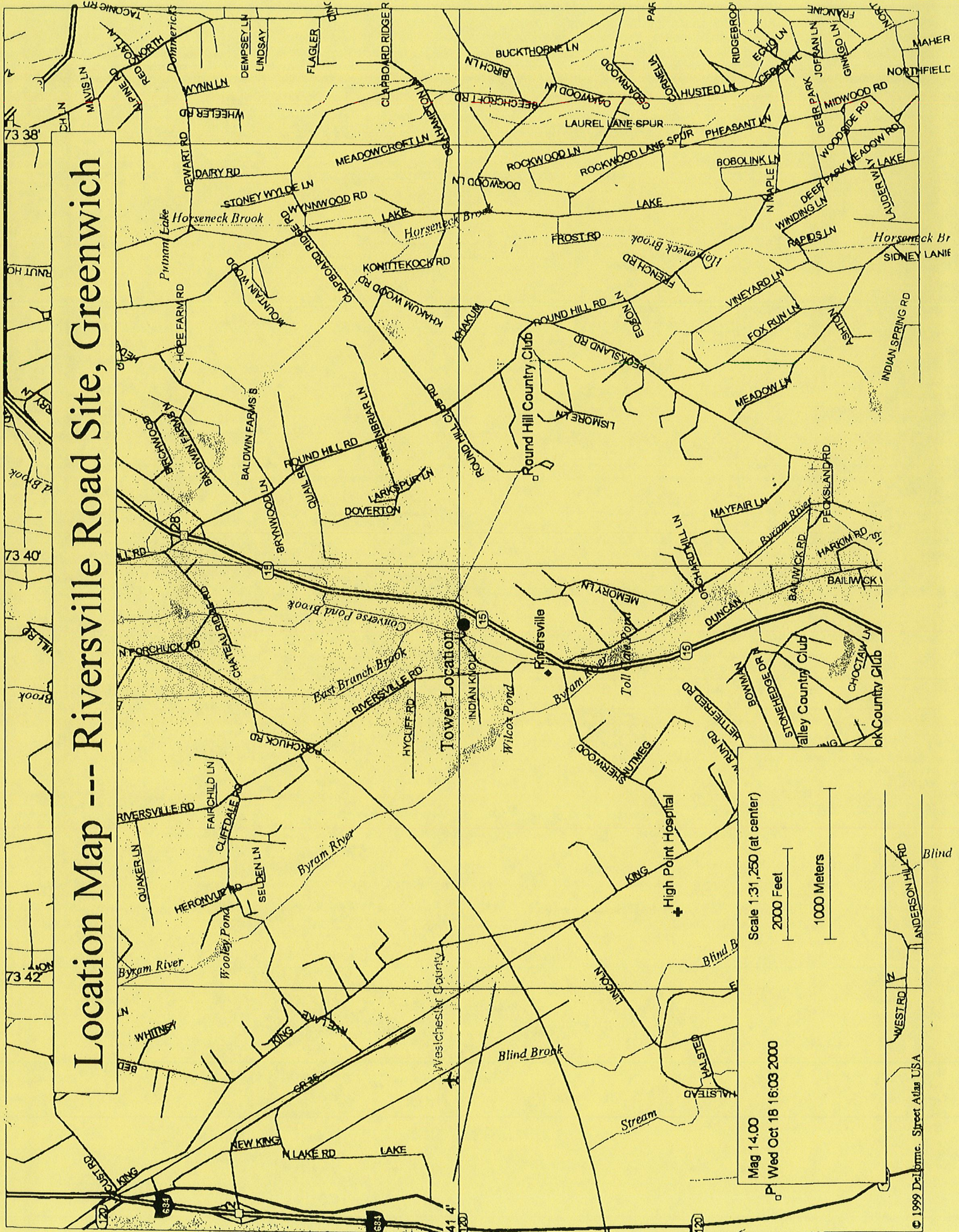
NOTES/COMMENTS:

JOEL - WITH APOLOGIES FOR OMITTING FROM EXEMPT MOD APPLICATION FILED YESTERDAY.

Steve



Location Map --- Riversville Road Site, Greenwich



Scale 1:31,250 (at center)
2000 Feet
1000 Meters

Mag 14.00
Wed Oct 18 16:03 2000

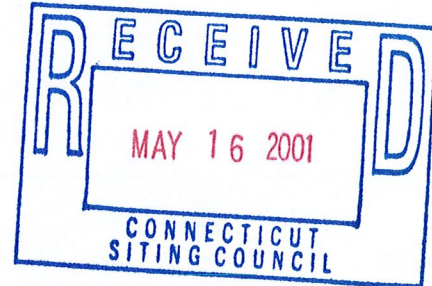


SNET Mobility, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7730
Fax: (860) 513-7614

Peter W. van Wilgen
Director – Real Estate Operations

May 16, 2001

Honorable Lolly H. Prince
First Selectman, Town of Greenwich
Town Hall 101 Field Point Road
Greenwich, CT 06836



Re: Notice of Exempt Modification – Existing Wireless Telecommunications Tower Facility, 363 Riversville Road, Greenwich, Connecticut (Docket No. 50).

Dear Ms. Prince:

On December 14, 2000, the Connecticut Siting Council approved a plan put forth in Petition 495 by SNET Mobility, LLC ("SNET") to expand the use of its existing multicarrier telecommunications tower facility at 363 Riversville Road, Greenwich, Connecticut.

SNET's Riversville Road facility is on property belonging to the Greenwich Council Boy Scouts of America ("Scouts") and used as the Scouts' camp facility. The Site lies immediately adjacent to and west of the Merritt Parkway.

Please accept this letter as notification to the Town of Greenwich under Regulations of Connecticut State Agencies ("R.C.S.A.") Section 16-50j-73 of revisions to the original construction plan which constitute an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). A Notice of Exempt Modification has been filed with the Connecticut Siting Council as required by Section 16-50j-73.

The Notice primarily concerns a modified antenna and tower design proposed by VoiceStream Wireless, which is a tenant of SNET on the Riversville Road tower, and is submitted by SNET at the request of VoiceStream. Additionally, we are proposing a larger equipment pad for potential tenant Metricom, Inc.

The attached letter fully sets forth the SNET proposal. However, if you have any questions or require any further information on the plans for the site or the Siting Council's procedures, please contact the undersigned or Mr. Joel M. Rinebold, Executive Director of the Connecticut Siting Council, at (860) 827-2935.

Sincerely,

Peter W. van Wilgen
Director – Real Estate Operations

Enclosure



SNET Mobility, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7730
Fax: (860) 513-7614

Peter W. van Wilgen
Director – Real Estate Operations

May 16, 2001

Mr. Mortimer A. Gelston, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: Notice of Exempt Modification – Existing Wireless Telecommunications Tower Facility, 363 Riversville Road, Greenwich, Connecticut (Docket No. 50).

Dear Mr. Gelston:

On December 14, 2000, the Connecticut Siting Council ("Council") approved a plan submitted by SNET Mobility, LLC ("SNET") in Petition 495 to install additional telecommunications antennas and associated equipment at an existing multicarrier telecommunications tower facility at 363 Riversville Road, Greenwich, Connecticut. The site is on property belonging to the Greenwich Council Boy Scouts of America ("Scouts") and is used as the Scouts' camp facility. The site lies immediately adjacent to and west of the Merritt Parkway.

Please accept this letter as notification to the Council, pursuant to R.C.S.A. Section 16-50j-73, of changes to the Council's previous approval that constitute an exempt modification under R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter is being sent to the First Selectman of the Town of Greenwich.

The plan approved in Petition 495 calls for construction of a more structurally sturdy replacement tower that will accommodate additional commercial carriers. The replacement tower will be erected approximately 100 feet southwest of the original monopole, and the older tower will be dismantled.

This Notice to the Council presents a revised tower and antenna design and is filed by SNET at the request of its facility tenant VoiceStream Wireless ("VoiceStream"). Pursuant to Petition 495, VoiceStream's antenna array was to be configured as a pole-mounted cluster of three (3) panel antennas with center of radiation at 160 feet above ground level ("AGL"). However, as described in the attached letter, VoiceStream has determined that a full platform with up to twelve (12) panel antennas will be necessary to meet their customer growth and coverage objectives at the facility. The center of radiation for these antennas would remain at 160 feet AGL, but structural considerations require that the small-diameter pole be replaced by an actual extension of the tower. The tower itself would be designed and built, therefore, as 160 feet in height. However, the smaller EMS panel antennas VoiceStream now proposes for use on the

antenna platform would extend to approximately 162' 3" AGL, which is approximately 9 inches lower than the total height approved in Petition 495.

Additionally, while Metricom, Inc. ("Metricom") is still expressing interest in mounting antennas on the tower, it has not yet committed itself to the project. Nonetheless, Metricom has requested that we enlarge the concrete pad approved for its use from 8' x 8' to 10' x 20' in anticipation of its decision. The enlarged pad would be suitable for other potential carriers should Metricom decide against using the Riversville Road site.

SNET is licensed by the Federal Communications Commission ("FCC") to provide cellular mobile telephone service in the Bridgeport CT MSA Market Area, which includes the area to be served by SNET's proposed installation. The public need for cellular service has been predetermined by the FCC. The Scouts have agreed to plans put forth by SNET pursuant to mutually acceptable terms and conditions and have also authorized SNET to obtain all necessary government approvals.

Attached to this Notice are a location map, the proposed site plan, and the proposed tower profile. Engineering information concerning the structural carrying capacity of the replacement tower will be provided to the Council as soon as it is available.

The replacement facility approved in Petition 495 consists of a 150 foot monopole topped with a mounting pole and three VoiceStream EMS panel antennas, for a total height of 163 feet. The expanded compound will be surrounded by an 8-foot high fence consisting of chain link fencing facing the Merritt Parkway and wood stockade fencing on sides facing the Scout camp.

As shown on the attached drawings and as further described below, VoiceStream proposes to install, in lieu of the 3-antenna cluster, up to twelve (12) EMS Model RR90-17-02DPL2 panel antennas, approximately 56 inches in height, on a full triangular antenna platform with the center of radiation at the 160 foot level of the tower. VoiceStream's proposed 10' x 20' equipment pad is identical to that approved in Petition 495.

The changes to the Greenwich tower facility do not constitute a modification as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2) because they will not result in any substantial adverse environmental effect:

1. The height of the overall structure will be unaffected.
2. The proposed changes will not affect the property boundaries. All new construction will take place within the existing fenced compound as approved by the Council in Petition 495.
3. The proposed additions will not increase the noise level at the existing facility by six decibels or more. Except for noise resulting from construction, the only additional sound will be from equipment cooling systems.

4. Operation of the proposed antennas will not increase the total radio frequency electromagnetic radiation power density, measured at the tower base, to or above the standard adopted by the State of Connecticut and the FCC. The "worst-case" exposure calculation in accordance with FCC OET Bulletin No. 65 (1997) for a point of interest at the base of the tower in relation to the operation of the currently proposed antenna array is as follows:

Company	Centerline Height (feet)	Frequency (MHz)	Number of Channels	Power / Per Channel (Watts)	Power Density † (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit
VoiceStream *	160	1930 - 1945	8	300	0.0208	1.0000	2.1
SNET	150	880 - 894	19	100	0.0304	0.5867	5.2
Verizon	140	869	19	100	0.0349	0.5793	6.0
Nextel	130	851	9	100	0.0192	0.5673	3.4
Sprint	120	1962.5	11	122	0.0335	1.0000	3.3
AT&T	110	D: 1945 E: 1985	8	100	0.0238	1.0000	2.4
Total							22.4%

* Power density provided by VoiceStream.

† Please note that the standard power density equation provided by the Council in its memo of January 22, 2001 incorporates a ground reflection factor of 2.56 as described in FCC OET Bulletin No. 65. Power densities have been recalculated relative to Petition 495 for ground-level exposure rather than head-level exposure.

As the table demonstrates, the cumulative "worst-case" exposure would be 22.4 % of the ANSI/IEEE standard, as calculated for mixed frequency sites. Total power density levels from the revised antenna configurations would thus remain well within applicable standards.

For the foregoing reasons, SNET respectfully submits that proposed changes to implement expanded shared use at the Greenwich site constitute an exempt modification under R.C.S.A. Section 16-50j-72(b)(2). Please feel free to call me at (860) 513-7730 with questions concerning this application. Thank you for your consideration in this matter.

Respectfully yours,



Peter W. van Wilgen
Director – Real Estate Operations

Enclosures

cc: Honorable Lolly H. Prince, First Selectman, Town of Greenwich
Sherry Sukow, VoiceStream Wireless



OMNIPOINT COMMUNICATIONS
100 Filley St., Bloomfield, CT 06002
Phone: (860) 692 - 7100
Fax: (860) 692 - 7159

Technical Memo

To: Haider Syed
From: Enrique Ramos, Jr. (Radio Engineering Consultant)
cc: Mike Fulton
Subject: Expansion and Traffic – CT-11-069A
Date: 05/15/01

May 15, 2001

This document defines the expansion and traffic engineering guidelines for VoiceStream CT-11-069A in 363 Riversville Road, Greenwich, CT. It aims to provide methods to resolve both cell utilization and exhaustion in the future by considering these four components:

- 1) Current subscriber numbers
- 2) Current traffic
- 3) Current covered population per site
- 4) Forecast subscriber numbers.

VoiceStream generally dimensions new markets with this set of network profile. This profile is not static, but can change every hour of every day. The profile is meant to be used as a starting point in dimensioning. Periodic measurements should be taken and compared with the engineering designs. The traffic estimates per cell have been derived from typical network parameters. Some natural variation will be experienced within the operational networks, requiring some cells to be dimensioned based on the local traffic conditions.

In the case of CT-11-069A, it is recommended that additional capacity be added in the future to relieve "blocking". Blocking is a measure of inability of network resources to provide service and caused by congestion on the radio interface, which is measure in terms of call establishment failure due to lack of radio resources for mobile originating and mobile terminating calls.

In line with this expansion, it is also recommended that we install antenna platform to replace the AcCELLerator at the site. This will enable us to install additional antennas needed for the expansion, up to the maximum possible configuration of the site, i.e., four (4) antennas per sector. The use of the platform will also provide "diversity reception". It is achieved by deploying two receivers and two receive antennas per sector at the base station. Most commonly these antennas are physically separated from each other in a scheme called spatial diversity and due to the physical separation between these two antennas, the multipath characteristics will differ slightly between the two branches. The greater the separation, the greater the difference in the multipath characteristics and the lower the probability that both antennas will be in a deep fade at the same time.

CT-11-069A is an important site in the Greenwich area. It is a critical coverage objective for our network that the height, capacity and location required for this site were designed to best meet our goals.



VOICESTREAM WIRELESS CORPORATION

100 Filley St, Bloomfield, CT 06002-1853

Phone: (860) 692-7100

Fax: (860) 692-7159

Technical Memo

To: Haider Syed
From: Enrique Ramos, Jr. (Radio Engineering Consultant)
cc: Mike Fulton
Subject: Power Density Report for CT-11-069A
Date: 15-May-01

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the Voicestream Wireless Corporation PCS antenna installation on a Monopole at 363 Riverside Road, Greenwich, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from several locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

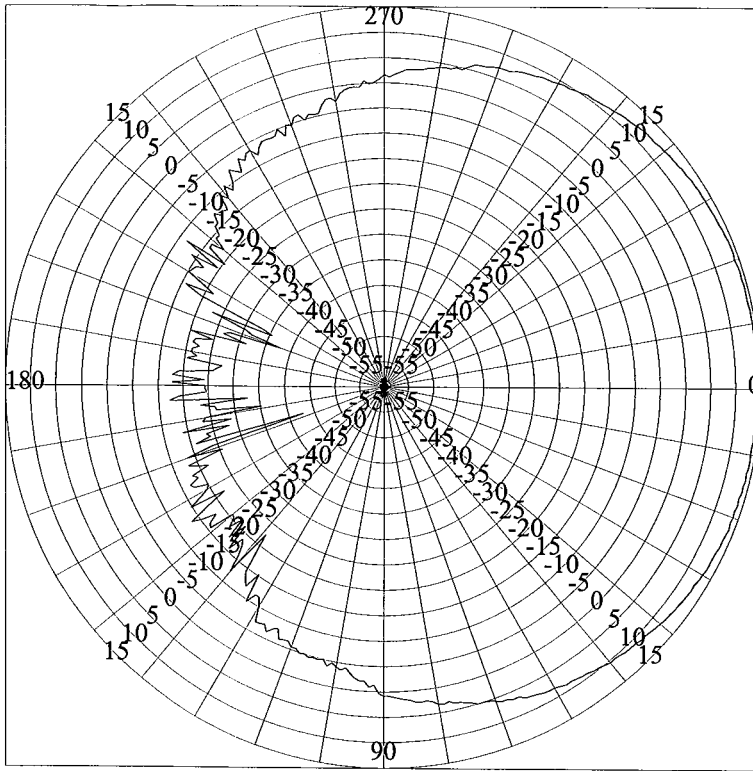
- 1) The emissions from Voicestream Wireless transmitters are in the 1930-1950 MHz frequency band.
- 2) The antenna cluster consists of three sectors, with 4 antennas per sector. The model number for each antenna is EMS-RR90-17-02DPL2.
- 3) The antenna height is 160 Feet center line.
- 4) The maximum transmit power from each sector is 2421.76 Watts Effective Isotropic Radiated Power (EIRP) assuming 8 channels per sector.
- 5) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
- 6) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) The average ground level of the studied area does not significantly change with respect to the transmitting location.

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

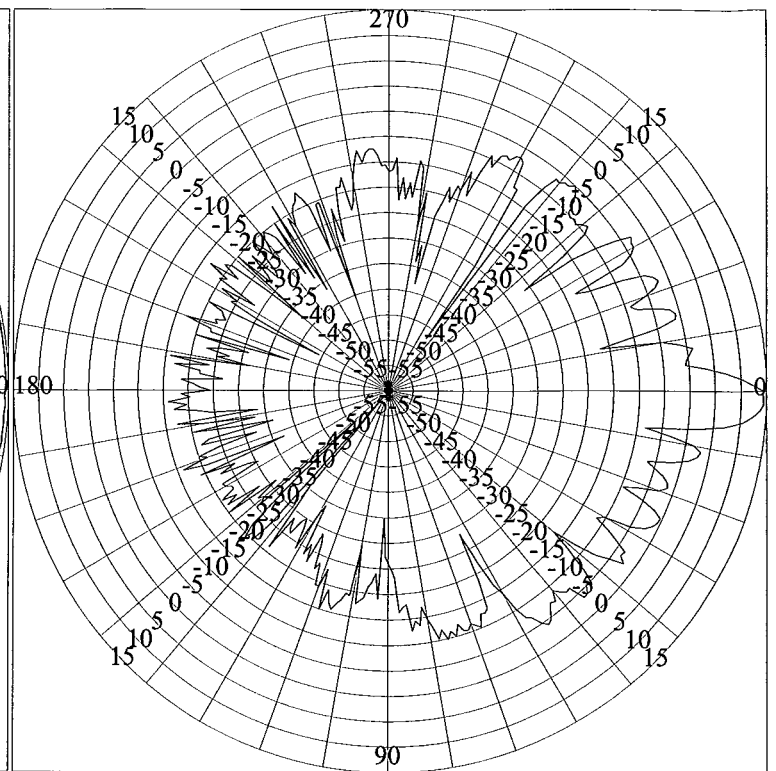
3. Conclusion:

Based on the above worst case assumptions, the power density calculations from the Voicestream Wireless Corporation PCS antenna installation on a Monopole at 363 Riverside Road, Greenwich, CT, is 0.020755 mw/cm². This value represents only 2.0755% of the Maximum Permissible Emission (MPE) standard of 1000 microwatts per square centimeter (uw/cm²) set forth in the FCC/ANSI/IEEE C95.1-1991. Details are shown in the attachment.

Furthermore, the proposed antenna location for Voicestream Wireless will not interfere with existing public safety telecommunications, AM band and FM band radio broadcast, TV, Police Communication, HAM Radio communications and other signals in the area.



Horizontal

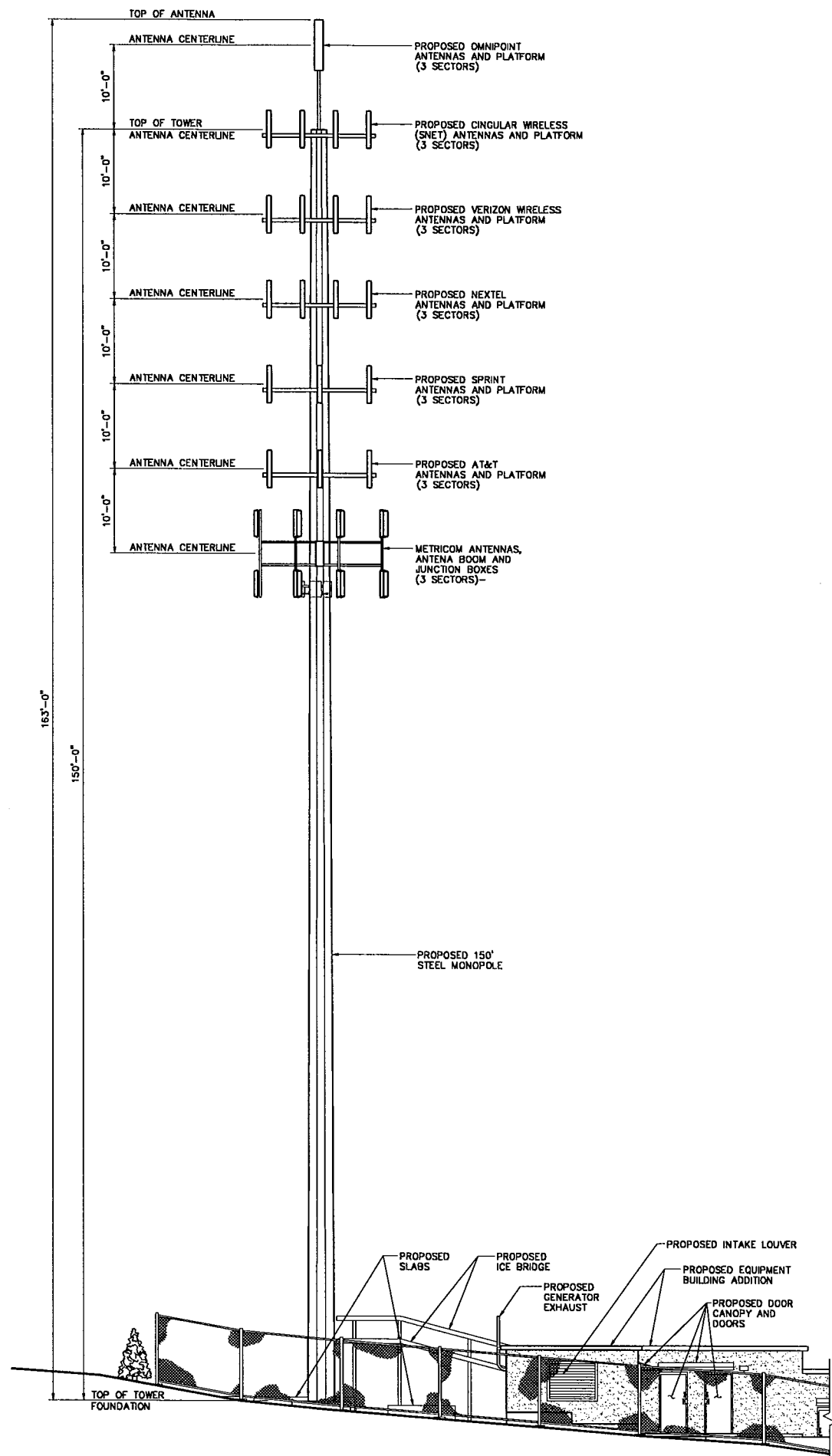


Vertical

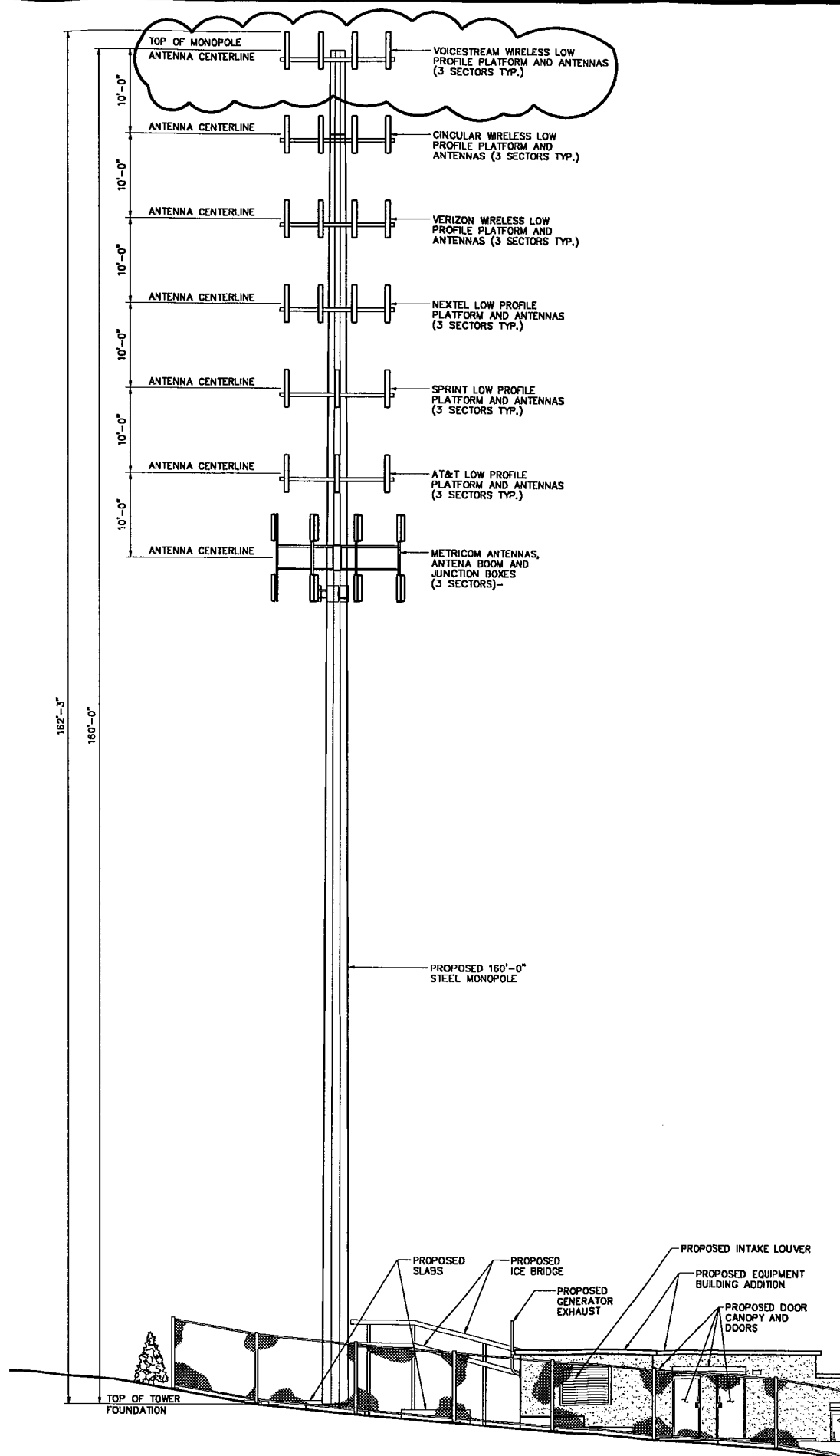
Manufacturer:	EMS Wireless		
Model:	RR90-17-02*P		
Description:	EMS OptiRange 17 dBi gain slant 45 pol array		
File Name:	Rr90172.apf		
Length:	4.67 Feet		
Minimum Gain:	-58.24	Maximum Gain:	14.46
Mechanical Tilt:	0	Beam width (H, V):	90, 6
Horizontal Elevation:	0	Vertical Azimuth:	0

Worst Case Power Density

Region 11 - Connecticut Power Density Calculation Site: CT-11-069A Site Address: 363 Riverside Road Town: Greenwich Pole Height: 163FT Tower Style: Monopole	
Base Station TX output	20 W
Number of channels	8
Antenna Model	EMS-RR90-17-02DPL2
Cable Size	1-5/8"
Cable Length	179.3 ft
Antenna Height	160.0 ft
Ground Reflection	1
Frequency	1930.00 MHz
Jumper & Connector loss	2.62 dB
Antenna Gain	16.5 dBi
Cable Loss per foot	0.0116 Loss part
Total Cable Loss	2.07988 dB
Total Attenuation	4.69988 dB
Total EIRP per channel (in Watts)	54.81 dB
Total EIRP per sector (in Watts)	302.72 W
	63.84 dB
	2421.76 W
	neg
	11.80012
Power Density (S) =	0.020755 mW / cm²
% MPE =	2.0755%
Equation Used:	$S = \frac{(1000 \text{ (gr)})^2 (\text{Power})^{10 \text{ (neg/10)}}}{4\pi (R)^2}$
Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997	



2 PARTIAL EAST ELEVATION-APPROVED



1 PARTIAL EAST ELEVATION-PROPOSED



A&E FIRM
URS CORPORATION AES
 500 ENTERPRISE DRIVE
 ROCKY HILL, CONNECTICUT
 1-(800)-529-8882

A&E SEAL

PROJECT NO: F301804.04/F03

DRAWN BY: CRS

CHECKED BY:

ISSUED FOR	
05-16-01	SITING COUNCIL

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BOY SCOUTS
 363 RIVERSVILLE RD.
 GREENWICH, CONNECTICUT

SCALE: AS NOTED

DATE: 05-16-01

DRAWING 2 OF 2

EXTERIOR ELEVATIONS

SC-2



cingular
WIRELESS

A&E FIRM
URS CORPORATION AES
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(800)-529-8882

A&E SEAL

PROJECT NO: F301804.04/F03

DRAWN BY: CRS

CHECKED BY:

ISSUED FOR
05-16-01 SITING COUNCIL

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BOY SCOUTS

363 RIVERSVILLE RD.
GREENWICH, CONNECTICUT

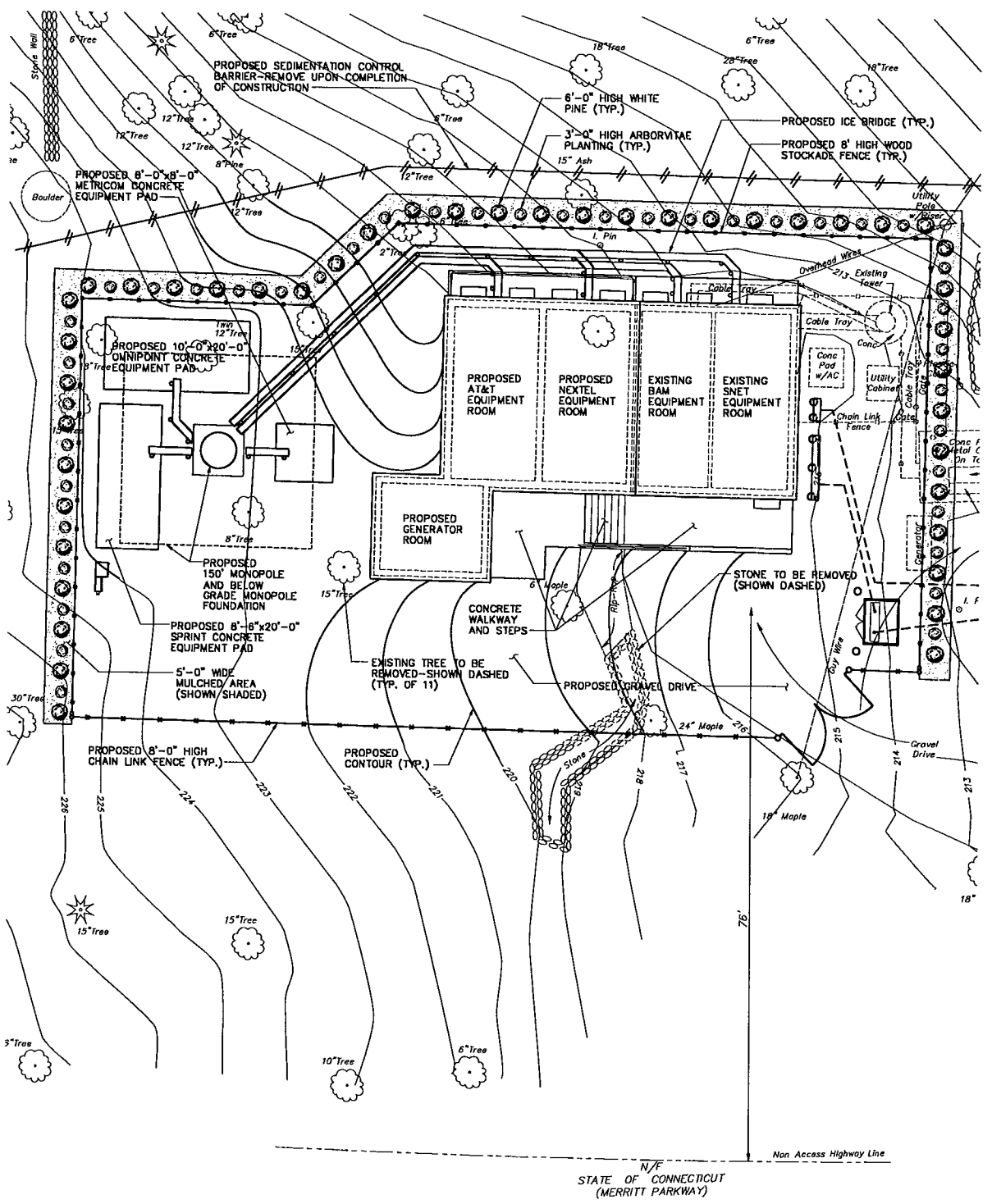
SCALE: AS NOTED

DATE: 05-16-01

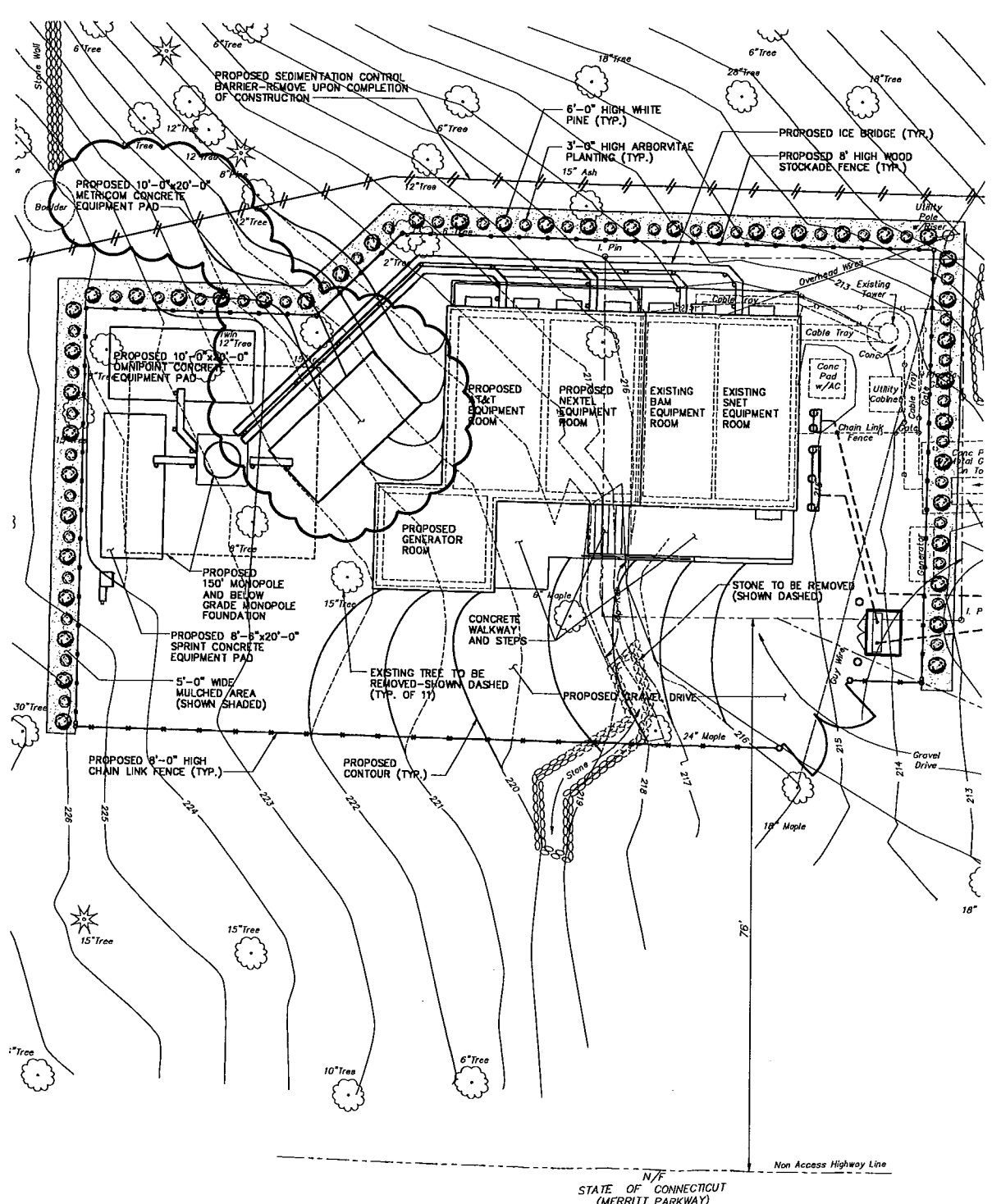
DRAWING 1 OF 2

SITE PLAN

SC-1



2 SITE PLAN-APPROVED
SC-1



1 SITE PLAN-PROPOSED
SC-1